

NEW SPECIES AND GENERA OF NORTH AMERICAN
LEPIDOPTERA.

BY WM. BARNES, M.D., AND J. H. MCDUNNOUGH, PH.D., DECATUR, ILL.

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Amolita delicata, sp. nov.

♂.—Head, thorax and abdomen pale gray; primaries very pale ochreous, suffused in the basal half and along costa with grayish, and finely sprinkled with black scales; faint traces of an oblique ochreous dash from apex to end of cell, caused by a lack of black scaling at this point; two minute black points may or may not be present at end of cell, close together; veins more or less marked with ochreous; fringes concolorous; secondaries slightly smoky, with traces of a dark terminal line and a smoky line cutting the white fringes.

♀.—Very similar to the ♂; the oblique apical dash better defined, due to darker marginal shading on both sides; frequently traces of a dark shade in the cell; veins light ochreous, giving a distinct strigate appearance to outer area of wing; secondaries pure white, with slight sprinkling of dark scales along costa and outer margin; fringes white with dark basal line. Beneath primaries of ♂ smoky, secondaries whitish, sprinkled with smoky especially along costa, and with faint discal dot; in ♀ primaries are much lighter than in ♂ and the discal dot of secondaries is wanting. Expanse, ♂, 25 mm.; ♀, 29 mm.

Habitat: White Mts., Ariz., 9 ♂s, 7 ♀s. Types, collection Barnes.

Vein 8 of secondaries arises from about the middle of the cell and not from the base as in Hampson's definition of the genus *Amolita*. As, however, this is also the case with *roseola* Sm., which is retained in the genus, we place it here rather than in *Doerriessa* Staud., in which it would fall according to Hampson's tables. The ♂ antennæ are laminate. The species varies somewhat as regards the black sprinkling, several specimens being almost uniformly pale ochreous, whilst others are distinctly sprinkled, with the veins showing clearly.

Amolita fratercula, sp. nov.

Primaries: ground colour pale ochreous suffused with gray, and rather evenly shaded with smoky brown; the most prominent feature is an oblique dash of the ground colour which extends from a point on outer margin just below costa inwards to the cell and is shaded superiorly with smoky brown, which shade extends more or less distinctly through the cell to the base of wing, leaving the cubital vein as a fine ochreous line distinct to the discocellular vein. In the ♂ two very faint dark dots are

visible at the end of cell; fringes concolorous. Secondaries in the ♂ deep smoky with a pale line at the base of the dusky fringes; in ♀ slightly smoky with pale fringes, cut by a slightly darker line. Beneath primaries smoky, lighter outwardly; secondaries lighter, sprinkled with smoky brown. Expanse, ♂ 24 mm., ♀ 31 mm.

Habitat: ♂, Palmerlee, Ariz.; ♀, White Mts., Ariz.; 1 ♂, 1 ♀. Types, collection Barnes.

The species is closely related to *delicata*, but is in general much darker and lacks the strigate appearance of this species, due to the fact that the veins in the outer area of primaries are not visible; the dusky secondaries in both sexes first led us to separate it. The apical ochreous dash is also not direct from the apex of the wing but from a point on the outer margin below apex; the palpi are distinctly longer than in *delicata*.

Redingtonia, gen. nov.—(Type *R. alba*, sp. nov.)

Palpi short, upturned, third joint porrect; proboscis well developed, front with a pointed corneous prominence, its lower edge produced to a trilobate plate with corneous plate below it; head and thorax clothed with rough hair, intermingled with scales; anterior tibia unarmed; posterior tibiæ clothed with long hair, without spines; primaries with broad cell, vein Cu_2 from well before lower angle, veins Cu_1 , M_3 and M_2 from around lower angle, M_1 from just below upper angle, areole present, veins R_3 and R_4 stalked, from apex of areole with R_5 , R_2 from areole, R_1 from middle of cell. Secondaries with M_2 obsolescent from below middle of discocellular, R and M_1 from apex of cell, M_3 and Cu_1 from lower angle.

The extraordinary frontal protuberance, which may be compared to that of *Azenia*, with an extra pointed prominence added dorsally, as well as the rough hairy squamation, sufficiently characterize this genus. It falls near *Azenia* Grt., according to Hampson's tables (Lep. Het., Vol. IX).

R. alba, sp. nov.

Front and abdomen pale ochreous. Head, thorax, and wings pure white, immaculate. Beneath primaries rather smoky, secondaries white. Expanse, 29 mm.

Habitat: Redington, Ariz., 2 ♀s. Type, collection Barnes.

Genus Homolagoa, gen. nov.—(Type *H. grotelliformis*, sp. nov.)

Palpi upturned, 3rd joint long, pointed, smoothly scaled; antennæ ciliate, ocelli present; thorax clothed rather roughly with hair and scales; abdomen of ♀ with a thick tuft of hairs at extremity; tibiæ unarmed,

front with a prominent wart-like conical tubercle and a slight infra-clypeal plate; primaries with well rounded outer margin, vein R_1 from middle of cell, R_2 from upper angle of areole, R_3 and R_4 on long stalk, from apex of areole with R_5 , M_1 from below upper angle of cell, M_2 and M_3 close together from above lower angle of cell, Cu_1 from lower angle, Cu_2 from beyond centre of cell. Secondaries with Sc. joined to cell at base, R and M_1 slightly stalked, M_2 curved downwards at base from well above lower angle of cell, M_3 and Cu_1 connate from lower angle, Cu_2 from beyond centre of cell.

The presence of a well developed vein M_2 on secondaries would place the genus in the family *Erastrinae* of Hampson. Apparently its position would be somewhere near *Exyra* Grt. The frontal structure and the abdominal tuft of the ♀, similar to that found in *Lagoa* and certain Liparid species, render the genus easily recognizable.

H. grotelliformis, sp. nov.

Palpi blackish; head, thorax and primaries white; abdomen white with the segmental divisions banded with black; maculation of primaries much as in certain *Grotella* species; a black dot on costa at base; a transverse subbasal band of three black dots, one on costa, one on inner margin and the middle one equidistant from both; a transverse median band of 5 black dots slightly curved inward at costa consisting of a dot on costa, two vertically placed dots at end of cell, a dot below vein 2 and another on inner margin; fringes white, slightly tipped with black in costal portion; secondaries smoky, paler basally, with faint trace of a dark antemedial line; fringes white. Beneath primaries dark smoky brown with white fringes, secondaries white with discal dot and dot about middle of costa. Expanse, 22 mm.

Habitat: Redington, Ariz; Palmerlee, Ariz., 1 ♂, 2 ♀s. Types, collection Barnes.

Tarache areloides, sp. nov.

Head, front and palpi dark purple-brown, tegulae, thorax and abdomen cream-coloured; primaries with basal third as far as inner margin of orbicular cream-coloured, remainder of wing deep purple-brown, shaded broadly at anal angle with lighter shades; basal line geminate, gray-green, extending half across wing; t. a. line geminate, gray-green, the lines broader at costa, angled inwardly in the cell, incurved on submedian fold; orbicular and reniform small, oval, outlined with black and filled with blue-black scales, the former usually entirely within the dark area of

wing, occasionally with the inner edge just projecting into the white area ; on the costa just beyond reniform a large white quadrate patch from the base of which the geminate t. p. line arises and bends sharply inward below reniform and orbicular, almost reaching the margin of the dark area of wing ; from a point below the orbicular it turns towards the inner margin, forming two lunulate marks, the upper being the larger ; the space beyond the t. p. line is almost entirely filled with bluish purple ; s. t. line indistinct, marked with creamy at costa and in central area, incurved at vein 2 ; a broken terminal dark purple-brown line ; fringes bluish purple, cut with white opposite cell and between veins 2 and 3. Secondaries whitish with narrow smoky border in ♂, almost entirely smoky in ♀ ; fringes pale. Beneath, primaries smoky with the white patch of upper side marked in ochreous. Secondaries suffused with pale smoky brown, with a discal spot and indistinct postmedian line angled sharply opposite the cell. Expanse, 27 mm.

Habitat : White Mts., Ariz., 3 ♂s, 5 ♀s. Types, collection Barnes.

Closely related to *areli* Stkr.; differs in the much larger size of the white patch and the fact that the orbicular is not contained within the light area of wing.

(To be continued.)

THE OLDEST AMERICAN HOMOPTEROUS INSECT.

BY T. D. A. COCKERELL. UNIVERSITY OF COLORADO.

With very few exceptions, the cretaceous strata of North America, so rich in various organic remains, have failed to yield insects. A cockroach from the Judith River Beds in Montana has been described as *Stantonella cretacea* (Handlirsch). A Protoblattoid from the Kootanie of Montana is called *Lygobius knowltoni* Mitchell. Beetle remains named *Archiorhynchus angusticollis* Heer, *Curculiopsis cretacea* (Heer), and *Elytrulum multipunctatum* (Heer), are from the lower cretaceous of Greenland, while one from the Pierre formation of Manitoba is named *Hylobiites cretaceus* Scudder. Egg-masses from the Laramie Beds of Colorado are called *Corydalites fecundus* Scudder. Considering the enormous time represented by the cretaceous, and the richness of the flora, it is certain that there must have existed a succession of insect-faunæ including innumerable types, almost all of which are now unknown to us. This is particularly unfortunate, because during this period the modern families of insects must have been in course of evolution. Tertiary insects we have in abundance, but they are not old enough to